

DI-DRILL, INC.
 BAKERSFIELD, CALIFORNIA
 MAGNETIC DIRECTIONAL SURVEY
 BY ANGLE AVERAGE METHOD

DI-DRILL, INC.
 BAKERSFIELD, CALIFORNIA
 INRUN SURVEY
 BY ANGLE AVERAGE METHOD

JOB NUMBER: B4268

WELL NAME: IW 22D-10

 * OREGON NATURAL GAS *

JOB NUMBER: B4268
 WELL NAME: IW 22D-10
 LOCATION: MIST.
 SURVEY DATE: 3 SEPT. 1988
 SURVEY ENGINEER: GEORGE LOVE
 MAGNETIC DECLINATION: 21.00E
 TIE-ON COORDINATES AT: 452 M.D.
 TAKEN FROM: DATA SURVEY SHEET
 VERTICAL SECTION CALCULATED IN A
 PROPOSAL DIRECTION OF: S79-00W

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	COURSE DEV.	INCL	BEARING	LATITUDE	DEPARTURE	D-LEG PER 100	STATION DISP.	DIRECTION
452.00	452.00	0.00	0.00	00-00	N44-00W	0.00 N	0.00 E	0.00	0.00	AT N00-00E
527.00	527.00	0.09	0.16	00-15	N44-00W	0.12 N	0.11 W	0.33	0.16	AT N44-00W
621.00	621.00	0.15	0.62	00-30	N11-00E	0.71 N	0.29 W	0.44	0.76	AT N22-10W
714.00	713.99	-0.19	0.81	00-30	N16-00E	1.50 N	0.10 W	0.05	1.50	AT N03-47W
896.00	895.99	-1.19	1.19	00-15	N76-00E	2.32 N	0.76 E	0.24	2.44	AT N18-04E
976.00	975.97	-1.49	1.92	02-30	N80-00W	4.24 N	0.69 E	3.41	4.30	AT N09-15E
1034.00	1033.85	-2.07	3.71	04-50	N89-00W	4.60 N	3.00 W	4.13	5.49	AT N33-08W
1095.00	1094.52	-8.28	6.29	07-00	S85-00W	4.38 N	9.29 W	3.69	10.27	AT N64-45W
1158.00	1156.85	-17.41	9.18	09-45	S84-00W	3.50 N	18.42 W	4.37	18.75	AT N79-15W
1188.00	1186.37	-22.74	5.34	10-45	S81-00W	2.80 N	23.71 W	3.78	23.88	AT N83-16W
1268.00	1264.73	-38.86	16.12	12-30	S76-00W	0.41 S	39.51 W	2.52	39.51	AT S89-24W
1421.00	1414.25	-71.28	32.46	12-00	S76-00W	8.26 S	71.01 W	0.33	71.49	AT S83-22W
1575.00	1564.81	-103.60	32.35	12-15	S77-00W	15.82 S	102.46 W	0.21	103.67	AT S81-13W
1699.00	1686.10	-129.36	25.78	11-45	S77-00W	21.62 S	127.58 W	0.40	129.40	AT S80-23W
1823.00	1807.50	-154.59	25.25	11-45	S76-00W	27.51 S	132.13 W	0.16	154.60	AT S79-45W
1977.00	1958.68	-183.93	29.38	10-15	S76-00W	34.62 S	180.65 W	0.97	183.93	AT S79-09W
2097.00	2076.81	-205.00	21.10	10-00	S76-00W	39.72 S	201.12 W	0.21	205.00	AT S78-50W
2316.00	2292.64	-242.05	37.09	09-30	S77-00W	48.38 S	237.18 W	0.24	242.06	AT S78-28W
2532.00	2505.91	-276.27	34.26	08-45	S76-00W	56.38 S	270.49 W	0.35	276.30	AT S78-14W
2719.00	2690.86	-303.83	27.64	08-15	S73-00W	63.76 S	297.12 W	0.36	303.89	AT S77-53W
2770.00	2741.33	-311.11	7.32	08-15	S73-00W	65.90 S	304.12 W	0.00	311.18	AT S77-46W

 * THIS DIRECTIONAL SURVEY REPORT IS *
 * CORRECT TO THE BEST OF MY KNOWLEDGE *
 * AND IS SUPPORTED BY ACTUAL FIELD DATA! *
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 * COMPANY REPRESENTATIVE *
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 * THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF *
 * 2770.00 FEET EQUALS 311.18 FEET AT S77-46W *
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 * 2770.00 FEET EQUALS 311.18 FEET AT S77-46W *
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